

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: HALO COMMERCIAL

Report Number: P838602

Luminaire Tested: HCSQ640D010-HM63040930-61SQMB

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838602
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-4)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ640D010-HM63040930-61SQMB
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

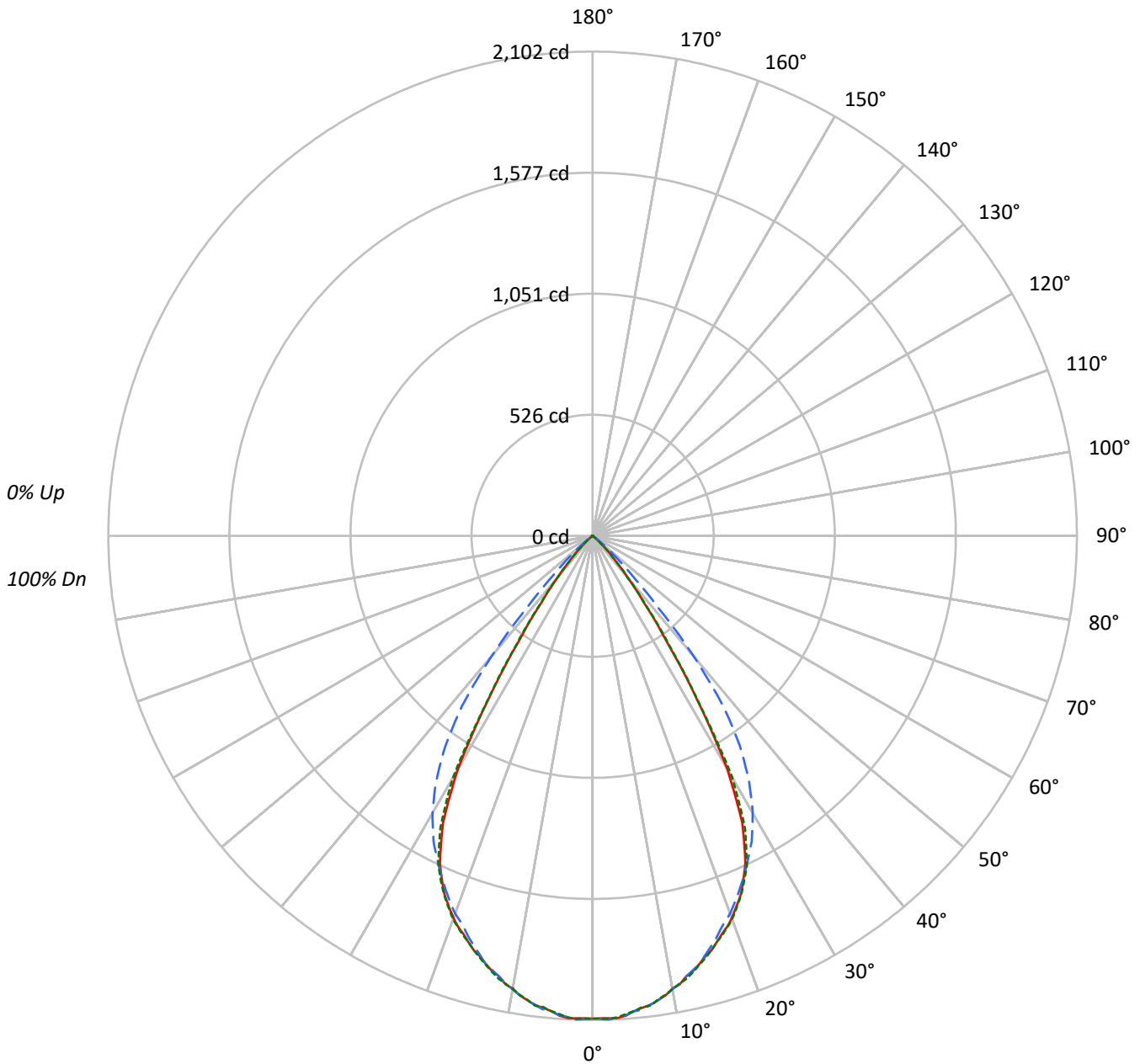
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2083.9 lumens
Efficiency: N/A
Efficacy: 50.8 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.01 / 1.03
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 41
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P838602
CATALOG NUMBER: HCSQ640D010-HM63040930-61SQMB

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100		
	1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	93	93	93	93	93	93		
	2	108	103	99	96	106	101	98	94	98	95	92	95	93	90	92	90	89	87	87	87	87	87	87		
	3	102	96	91	87	100	94	90	86	92	88	85	89	86	83	87	85	82	81	81	81	81	81	81		
	4	97	89	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75	75	75	75	75	75		
	5	92	84	78	73	90	83	77	73	81	76	72	79	75	72	78	74	71	70	70	70	70	70	70		
	6	87	78	72	68	86	77	72	68	76	71	67	75	70	67	73	69	66	65	65	65	65	65	65		
	7	83	73	67	63	81	73	67	63	71	66	63	70	66	62	69	65	62	60	60	60	60	60	60		
	8	79	69	63	59	77	68	63	59	67	62	58	66	62	58	65	61	58	56	56	56	56	56	56		
	9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53	53	53	53	53	53		
	10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50	50	50	50	50	50		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	90262	90262	90262
5°	89500	89574	89500
10°	87260	87409	87409
15°	84259	84032	84487
20°	80916	79981	81150
25°	74514	75080	75241
30°	58084	69086	60281
35°	29450	58543	30522
40°	13399	38287	13399
45°	5182	14413	5078
50°	797	4562	797
55°	255	893	255
60°	146	146	146
65°	173	0	173
70°	0	0	214
75°	0	0	283
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 14413 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	195.7	9.4
10°-20°	530.9	25.5
20°-30°	715.6	34.3
30°-40°	503.1	24.1
40°-50°	128.5	6.2
50°-60°	8.9	0.4
60°-70°	1.1	0.1
70°-80°	0.1	0.0
80°-90°	0.0	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1442.2	69.2
0°-40°	1945.4	93.4
0°-60°	2082.7	99.9
0°-90°	2083.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2083.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2096	2096	2096	2096	2096	
5°	2071	2074	2072	2074	2071	196
15°	1890	1887	1885	1890	1895	532
25°	1568	1574	1580	1586	1584	701
35°	560	742	1114	761	581	377
45°	85	128	237	129	83	74
55°	3	3	12	3	3	4
65°	2	2	0	2	2	1
75°	0	0	0	0	2	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2096.4	2096.4	2096.4	2096.4	2096.4
1°	2094.7	2096.4	2098.1	2098.1	2096.4
2°	2096.4	2091.3	2101.5	2096.4	2098.1
3°	2096.4	2086.2	2091.3	2094.7	2093.0
4°	2087.9	2081.1	2086.2	2084.5	2081.1
5°	2070.8	2074.2	2072.5	2074.2	2070.8
6°	2060.6	2064.0	2067.4	2062.3	2057.2
7°	2052.1	2050.4	2052.1	2055.5	2055.5
8°	2036.8	2040.2	2036.8	2038.5	2033.4
9°	2019.8	2019.8	2019.8	2023.2	2018.0
10°	1995.9	2004.4	1999.3	2002.7	1999.3
11°	1984.0	1980.6	1980.6	1982.3	1980.6
12°	1955.0	1958.4	1956.7	1960.1	1965.3
13°	1939.7	1941.4	1934.6	1943.1	1943.1
14°	1915.9	1914.2	1917.6	1915.9	1919.3
15°	1890.3	1886.9	1885.2	1890.3	1895.4
16°	1871.6	1863.1	1858.0	1864.8	1871.6
17°	1844.3	1835.8	1829.0	1842.6	1844.3
18°	1817.1	1813.7	1796.7	1813.7	1822.2
19°	1795.0	1783.0	1767.7	1786.4	1796.7
20°	1766.0	1755.8	1745.6	1755.8	1771.1
22.5°	1682.6	1674.0	1665.5	1677.4	1686.0
25°	1568.5	1573.6	1580.4	1585.5	1583.8
27.5°	1406.7	1452.7	1495.2	1468.0	1432.2
30°	1168.3	1284.1	1389.6	1302.8	1212.5
32.5°	846.4	1043.9	1263.6	1083.1	854.9
35°	560.3	742.5	1113.8	761.2	580.7
37.5°	364.4	499.0	929.8	500.7	381.5
40°	238.4	325.3	681.2	332.1	238.4
42.5°	146.5	206.1	413.8	214.6	146.5
45°	85.1	127.7	236.7	129.4	83.4
47.5°	39.2	69.8	134.5	68.1	40.9
50°	11.9	30.7	68.1	30.7	11.9
52.5°	5.1	8.5	32.4	8.5	5.1
55°	3.4	3.4	11.9	3.4	3.4
57.5°	3.4	1.7	3.4	3.4	3.4
60°	1.7	1.7	1.7	1.7	1.7
62.5°	1.7	1.7	1.7	1.7	1.7
65°	1.7	1.7	0.0	1.7	1.7
67.5°	1.7	0.0	0.0	0.0	1.7
70°	0.0	0.0	0.0	0.0	1.7
72.5°	0.0	0.0	0.0	0.0	1.7
75°	0.0	0.0	0.0	0.0	1.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



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Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270°

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77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0

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